

REMARKS

Claims 1-16 are pending in this application, with claims 1, 5, 9 and 13 being independent. Claim 1, 5, 9 and 13 have been amended. Favorable reconsideration is respectfully requested.

The Office Action rejected claims 1-16 under 35 U.S.C. § 103 as obvious from U.S. Patent No. 5,479,487 to Hammond in view of U.S. Patent No. 5,416,830 to MacMillan. This rejection is respectfully traversed.

Touch-tone IVR systems, which were introduced over a decade ago, are perhaps the most widespread class of human-computer interfaces. Since their inception, such systems have been adopted enthusiastically, particularly to perform customer-support types of functions, and have permitted their adopters to reduce significantly the amount of man-power required to maintain a call center. When configured properly, IVR systems can allow more customers to be provided with more support and services more quickly than ever before, and can streamline greatly the call center interaction process.

Nonetheless, many calling customers have classically exhibited an antipathy towards IVR systems, viewing them as frustrating and difficult to use. Such problems generally stem not from the fact that interacting with an IVR system is an inherently complex task, but rather from the fact that the systems are often poorly configured, particularly from the point of view of their usability. As a result, it has become extremely desirous to have tools which allow the manner in which an IVR system is used to be tracked and effectively evaluated, so that the systems usage may be assessed with an eye towards improvement.

Towards that end, the present invention relates generally to methods and systems for visually representing call events and completion times on a call-type basis for calls to an

automated response system of a call processing center. In the method of independent claim 1, the call includes an interactive voice response (IVR) portion and, at the caller's option, a hold portion and an agent-caller dialog portion. The method includes the steps of obtaining a recording of calls recorded from end to end, annotating events of interest that occurred during a recorded call, time stamping a time which each event of interest occurred and determining a call type of the call. The time stamp data for predetermined significant events are segregated to provide timings for those predetermined significant events, and the timings are tabulated by call type. Then, bar graphs are prepared and visually displayed to illustrate the timings.

Hammond relates to a system that purports to provide all functionality necessary to automate the processing of inbound and outbound telephone calls, including connecting callers to robot agents and live agents. Among other things, the Hammond system includes an IVR, with which the caller may interact to retrieve information on the caller's account and access other information that the IVR is configured to offer. The system of Hammond provides a conventional voicemail system which allows callers to leave messages to a particular person, such as a caller representative agent. In the tradition of conventional voicemail, the option to leave a message may be selected by the caller by pressing a particular digit on the caller's touchtone pad, which will cause the IVR system to transfer the caller to voicemail.

But Hammond is not at all concerned with call center assessment, and in particular is not at all concerned with visually representing call events and completion times on a call-type basis. Accordingly, Hammond fails to teach or suggest many features of claim 1.

For example, Hammond fails to teach or suggest "obtaining a recording of calls from end to end." Column 11, lines 5-12, identified in the Office Action as corresponding to this feature, describes providing an agent with a so-called "short screen." This short screen contains

data obtained by the initial IVR script, which data corresponds generally to information about the caller's account. (See Hammond at 9:62-66). The data on the short screen certainly does not include a recording of calls from end to end. In fact, it could not possibly include such recordings, since the short screen is provided before the agent makes a connection to a live agent.

Hammond also does not include "annotating events of interest that occurred during a recorded call, time stamping a time when each event of interest occurred, and determining a call type of the call" Column 11, line 14-22, identified in the Office Action as corresponding to this feature, simply describes a so-called "pacing algorithm" for dialing out from caller lists, and a situation in which one agent transfers a call to another agent or to a supervisor. It in no way describes the annotation of events of interest that occurred during a call, the time stamping of which such events occurred or the determination of a call type.

And column 11, line 1, also identified by the Office Action as relating to this feature, simply describes providing a caller with an estimated hold time, i.e. the length of time, a caller will likely be required to wait before being connected to a live agent. The provision at such an estimated time stamp can in no way be said to correspond to time stamping a time when an event of interest actually occurred.

Hammond also fails to disclose "segregating time stamp data for predetermined significant events of the annotated events of interest." Column 10, line 61 to column 11, line 12, identified in the Office Action as corresponding to this feature, describes the caller's option to select a call back from an agent at a specified future time. This functionality is in stark contrast to the present invention, in which time stamp data corresponding to significant events that actually occurred are segregated.

Finally, because Hammond is not directed to a method of visually representing call events and completion times, it does not teach or suggest the last recited step of “preparing and visually displaying bar graphs to illustrate the timings of the predetermined significant events.” The Office Action does not even contend that Hammond discloses this step, and of course it is plainly missing.

McMillan relates to a telephone response system, in which voicemail and voice response features are integrated. The graph of Fig. 3 (which is a line graph, and not a bar graph) is a representation comparing the information content of a telephone call session in a system according to MacMillan’s purported invention with the information content of a prior art system. Thus, the graph is simply presented in MacMillan to illustrate the system’s performance to the reader of the patent. It is not an output of the MacMillan system at all. And in any event, nowhere is it taught a suggested to visually display this graph (or any graph) to illustrate the timings of predetermined significant events. Accordingly, MacMillan does not correct any of the deficiencies of Hammond noted and discussed above.

Accordingly, Applicants respectfully submit that claim 1 is not obvious from Hammond or MacMillan, or their combination, and respectfully request the Examiner to remove the corresponding Section 103 rejection.

Independent claims 5, 9 and 13 are directed to apparatuses, systems or computer program products that incorporate the salient features of claim 1 discussed above, and are therefore patentable for the same reasons.

The remaining claims all depend from one of the independent claims discussed above, and each partakes in the novelty and non-obviousness of its respective base claim. In

addition, each recites additional patentable features of the present invention, and individual reconsideration of each is respectfully requested.

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CONCLUSION

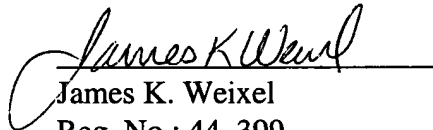
In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and an early passage to issue of the present application.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 07-2339. If an extension of time under 37 C.F.R. § 1.136 not accounted for above, is required, such an extension is requested and the fee should also be charged to our Deposit Account

Applicants' undersigned attorney may be reached at (781) 466-2220. All correspondence should be directed to our address given below.

Date: 10/23/2003

Respectfully submitted,


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